

Docket No.: PH DE020015 US
Pelt-27367
(PATENT)

REMARKS

Reconsideration and Allowance are respectfully requested in view of the foregoing amendments and the following remarks.

claims 1-12 are pending.

Regarding to § 102 Rejection

Claims 1-12 were rejected under 35 U.S.C. § 102(b) for being anticipated by *Wong* (U.S. Patent No. 5,543,740). Applicant respectfully traverses the rejection.

Applicant would agree with the Examiner that *Wong* discloses, in Figs. 1 and 2, an integrated half-bridge driver circuit. Applicant further respectfully points out that the workings of the *Wong* half-bridge driver circuit are explained starting at Col. 4, line 27 through Col. 5, line 25 of *Wong*. In particular, *Wong* points out that voltages V_1 and V_2 are provided by control circuit 48. *Wong* states, "Capacitors 64 and 62 are similarly charged to voltage levels V_1 and V_2 from substantially constant voltages provided from control circuit 48 through diodes 56 and 54, respectively." Col. 4, lines 34-39. Referring to Fig. 3b of *Wong* it is noted that although V_0 decays between time 2 and time 5, voltages V_1 and V_2 are held constant by control circuit 48 in order to designate the dead-time (the time between points 2 and 3, and between time points 4 and 5). As such, after a careful reading of *Wong* from Col. 4, line 26 through Col. 5, line 10 it is clear that voltages V_1 and V_2 are constantly provided by control circuit 48 both during the duty cycle of output transistor 16 as well as when output transistor 16 is off.

Applicant reminds the Examiner that a duty cycle is the proportion of time during which a component, device or system is operated. The duty cycle can be expressed as a ratio or as a percentage. For example, suppose a disk drive operates for one second, and then is shut off for 99 seconds, then it runs for one second again, and so on. It is then said that the disk drive runs

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for one out of 100 second, or $1/100^{\text{th}}$ of the time; and its duty cycle therefore, is one percent. As such, Applicant respectfully points out that the duty cycle of the transistor 16 of *Wong* is when transistor 16 is on. Applicant respectfully points out that *Wong* teaches providing a voltage from the control circuit 48, which is part of the low voltage section of *Wong* (see Fig. 1 and the Examiner's Office Action), while transistor 16 is off (i.e., not during the duty cycle of the *Wong* lower switching transistor 16).

With respect to claim 1, this claim recites, among other things, that "there is provided a first circuit section which controls the duty cycle of the upper switching means as a function of the duty cycle of the lower switching means and receives control signals from the low-voltage section exclusively during the duty cycle of the lower switching means." Applicant, as discussed above, respectfully points out that *Wong* teaches providing control signals from its low voltage section to its first circuit section (*Wong* 40, 30, 32, 72, as defined by the Examiner) during times that are not exclusively during the duty cycle of the lower switching means. As such, Applicant respectfully traverses the rejection and requests that the §102 rejection be withdrawn because *Wong* does not teach or anticipate claim 1.

With respect to claim 2, this claim is dependent on claim 1 and is therefore not anticipated for at least the same reasons as discussed above with respect to claim 1. Therefore, Applicant respectfully requests that the §102 rejection be withdrawn and submits that claim 2 is ready for allowance.

Claim 3 is indirectly dependent upon claim 1 and is therefore not anticipated for at least the same reasons as discussed above with respect to claim 1. Furthermore, claim 3 recites that, "the first integrating circuit configuration is equipped with at least one integration capacitor." Applicant points out that the Examiner indicated that the at least one integrating capacitor of *Wong* is element 66. Applicant respectfully submits that capacitor 66 of *Wong* is, in fact, not an

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integrating capacitor, but instead would be equivalent to the bootstrap capacitor C2 in Figures 1 and 2 of the present application and discussed on p. 6, lines 16-25 of the present application. As such, Applicant respectfully submits that capacitor 66 is not an integration capacitor that is part of the integration circuit and therefore respectfully submits that claim 3 is not anticipated by *Wong*.

Regarding claim 4, this claim is dependent upon claim 3 and is therefore not anticipated for at least the same reasons as discussed above with respect to claim 3. Furthermore, claim 4 recites, "that the charging circuit and the discharging circuit are both equipped with a respective constant-current source." Applicant points out that the Examiner indicates that elements 64 and 62 in *Wong* function as constant current sources. Applicant respectfully submits that this is incorrect. In particular, *Wong* states that "Capacitors 64 and 62 are similarly charged to voltage levels V_1 and V_2 from substantially constant voltages provided from control circuit 48 through diodes 56 and 54, respectively." As such, V_1 and V_2 are constant voltage sources and not a constant current source. In fact, they are settings for voltage V_1 and V_2 of Fig. 3b so that there is a "dead time" between times 2 and 3 as well as times 4 and 5. As such, Applicant respectfully requests that the §102 rejection be withdrawn because *Wong* does not anticipate claim 4 for the above-prescribed reasons. Applicant respectfully submits that claim 4 is ready for allowance.

Claims 5-11 are each either directly or indirectly dependent upon claim 1 and are therefore not anticipated for at least the same reasons as discussed above with respect to claim 1. Applicant respectfully requests that the §102 rejection be withdrawn and submits that these claims are ready for allowance.

Regarding independent claim 12, this claim recites, among other things that there is a first circuit section, "which controls the duty cycle of the upper switching means as a function of the duty cycle of the lower switching means and receives control signals from the low-voltage

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section exclusively during the duty cycle of the lower switching means." As discussed above with respect to *Wong*, Applicant respectfully submits that *Wong* does not anticipate a low voltage section that control signals to the first circuit section exclusively during the duty cycle of the lower switching means. As such, Applicant respectfully requests that the §102 rejection be withdrawn and submits that claim 12 is ready for allowance.

In view of the above amendments, Applicant believes the pending application is in condition for allowance.

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Respectfully submitted,

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